REMARKS

Claims 11-15, 17-20, and 29-42 are pending. No amendments have been made herein.

Claims 11-14, 17-20 29-34, and 36-42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh et al. (U.S. Patent No. 4,866,634) ("Reboh") in view of Hedstrom et al. (U.S. Patent No. 6,477,471) ("Hedstrom") and further in view of Vaidyanathan et al. (U.S. Patent No. 6,941,287) ("Vaidyanathan"). Claims 12, 13, 30, and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Vaidyanathan and further in view of Masch (U.S. Patent No. 5,930,762) ("Masch"). Claims 35, 41, and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Huh (U.S. Patent No. 5,396,612) ("Huh") and further in view of Nawrocki. Claims 11-15, 17-20, and 29-34 are rejected based on the judicially created doctrine of double patenting.

Rejection of Claims 11-14, 17-20, 29-34, and 36-42 under 35 U.S.C. § 103

Claims 11-14, 17-20, 29-34, and 36-42 are rejected under 35 U.S.C. § 103(a), as being unpatentable over Reboh in view of Hedstrom and further in view of Vaidyanathan. The rejection is respectfully traversed and reconsideration is requested.

On page 2 of the Office Action, the Examiner asserts that "Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection." In the present Office Action, the Examiner has asserted the same rejection of claims 11, 17-20, and 29-34. But the Examiner did not respond to the Applicant's arguments with respect to those claims. As a result, those arguments have not been properly considered by the Examiner, as the Examiner as rendered them moot without any consideration. As discussed in MPEP 2145, "Office personnel should consider all rebuttal arguments and evidence presented by applicants." MPEP 2142 states that the "ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with ***due consideration to the persuasiveness of any arguments*** and any secondary evidence." (emphasis added). Here, there was no consideration given to any of the arguments.

Accordingly, the arguments from the previous response are substantially repeated herein. Although there are no amendments in this Response, it would be inappropriate to receive a Final Office Action in response without any consideration of these arguments, which were originally presented in a Request for Continued Examination. Thus, while it is believed that the claims are

allowable, it is respectfully requested that any rejection based on the same art be presented in a Non-Final Office Action that responds to these arguments.

On page 4 of the Office Action, the Examiner recognizes that "Reboh et al. ('634) does not explicitly disclose assessing by the computer the creditability that changes to the set of input financial data are the result of one or more errors." In order to cure this deficiency, the Examiner asserts that Vaidyanathan teaches "assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors," as recited in claim 11, "an assessment of the credibility that changes between the information content of the one or more historical values and the information content of the set of input financial data are the result of one or more errors," as recited in claim 14, and "alerting a user that the change between the first information content of the inputted financial data and the second information content of the historical values may be a possible error based on the identified odds," as recited in claim 30, "calculating by the computer the likelihood that changes to the set of input data are the result of one or more errors," as recited in claim 35, "determining the likelihood that changes to the information content of the current data set is not the result of one or more errors," as recited in claim 41, and "mathematically determining, by a computer, a confidence level for the set of input data based upon a comparison between the first and second values, wherein the confidence level is determined using a mathematical calculation of the likelihood that changes between the first and second values are the result of one or more errors," as recited in claim 42. The Examiner cites to columns 13 and 40 for support in Vaidyanathan. However, Vaidyanathan also fails to teach these elements.

Vaidyanathan models empirical data, but does not assess whether changes in data are the result of errors. The Examiner asserts that Vaidyanathan's "fitness" of the data is representative of its accuracy. Vaidyanathan defines a fitness function to measure the function of any bit string relative to the problem at hand to measure the goodness or accuracy of any possible solution. Col. 12, lines 52-55. In an attempt to find the best inputs of the bit strings, Vaidyanathan uses the fitness function of the input variables in each bit string combination of variables. "This metric is referred to as a fitness function in a genetic algorithm. It is a measure of how well a given bit string solves the problem at hand." Col. 12, lines 40-43. Vaidyanathan uses a measure of the output state clustering to measure the information richness of the subspace of data. Col. 12, line 46 - col. 13, line 12. But Vaidyanathan does not assess the credibility that changes to the

input data is the result of an error. Indeed, the only error analysis in Vaidyanathan is a comparison of actual data to test data to determine an error rate, which is also not germane to the present invention.

Further, Vaidyanathan does not teach whether there is an error in a set of input financial data. The Examiner relies on column 40 of Vaidyanathan, which recites that it is desirable to identify certain variables for financial forecasting (e.g., stock pricing). "The most information-rich feature combinations (or genes) can be evolved using the present invention described herein to discover which variables at which earlier time points are most information-rich in affecting market variables for financial forecasting." Col. 40, lines 41-46. However, Vaidyanathan is not determining whether changes in the input data are errors. Instead, Vaidyanathan is using a model to find variables that best forecast a future price of a stock. Once the variable is chosen and data is input into the model, Vaidyanathan does not determine whether a change in the input data is a result of an error. As a result, Vaidyanathan's application of its process to financial data is not germane to the present invention.

Thus, Vaidyanathan fails to cure the deficiencies of Reboh and Hedstrom. Because claims 11, 14, 30, 35, 41, and 42 are believed to be allowable, claims 12, 13, 17-20, 29, and 31-34 are also believed to be allowable. Therefore, it is respectfully requested that the rejection of claims 11-14, 17-20, 29-34, and 36-42 be withdrawn.

<u>Rejection of Claims 12, 13, 30, and 34 under 35 U.S.C. § 103(a)</u>

Claims 12, 13, 30, and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Vaidyanathan and further in view of Masch. As discussed above, Reboh, Hedstrom, and Vaidyanathan fail to teach each and every element of the independent claims. For similar reasons, Reboh, Hedstrom, and Vaidyanathan fail to teach each and every element of claims 12, 13, 30, and 34, which depend on the independent claims and incorporate all of the limitations therein. With regard to claim 30, the Examiner asserts Masch only for an alleged teaching regarding "determining whether a variation in the inputted financial data is greater than a current mark to market or maximum likely increase in value." However, this element does not appear in claim 30. Accordingly, Masch fails to cure the deficiencies of Reboh, Hedstrom, and Vaidyanathan. Thus, claims 12, 13, 30, and 34 are also believed to be allowable. Therefore, it is respectfully requested that this rejection be withdrawn.

Rejection of Claims 35, 41, and 42 under 35 U.S.C. § 103(a)

Claims 35, 41, and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Huh and further in view of Nawrocki. This rejection is respectfully traversed.

On pages 8-9 of the Office Action, the Examiner recognizes that "Reboh et al. fails to teach preparing a report by the computer; wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: determining information content of the input data; performing a statistical analysis of the information content relative to the one or more historical values." In an attempt to cure this deficiency, the Examiner asserts that Huh "teaches preparing a report by the computer … wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: determining information content of the input data; performing a statistical analysis of the information content relative to the one or more historical values."

However, Huh is merely determining whether there is an error, then calculating the percentage of errors. Huh compares fields and if there are changes in a particular field, then Huh marks the field for follow up by a user. Col. 4, lines 36-49. The user examines the fields to correct the marked fields and can classify the marked fields as being the result of a spurious-operational error. Col. 4, lines 47-52. Only after all of the errors have been identified can the system provide statistics for the amount of errors in the data. Col. 4, lines 62-68. Huh can provide an error rate based on the number of errors previously identified. Col. 5, lines 1-4. But Huh is not using *the information content* to determine whether there may be errors. Instead, Huh is determining that there are errors and then calculating what percentage of the data is an error.

Although Huh may classify changes, Huh does not calculate the likelihood of changes being the result of an error. After being processed, Huh compares the data record against a data record that has not gone through processing. If there are any changes to the fields, the data record is flagged.

> Upon comparing copy 100-12 with copy 100-13 tracking processor 60 would find that data processor 13 had changed the contents of field 2 to the character string 'NO' and had changed the contents of field 4 to a value of '5100'. Accordingly, tracking processor 60 would flag such changes and then go on to compare copy 100-13 with copy 100-14. In doing so, tracking processor 60 would find that data processor 14 had changed the contents of field 1 to 'XYZ-001' and had changed

> the contents of fields 3 and 5 to 0 and 1, respectively. Similarly, tracking processor 60 would flag those changes.

Col. 3, line 64 to Col. 4, line 7. A user then determines whether the flagged field is an error. Huh identifies different classifications for changes to the fields:

> Such changes may be classified as being either normalization, translational, or spurious-operational changes. A normalizational change occurs as a result of inserting in or ***deleting from a record*** one or more so-called delimiters, spaces, etc., to meet a particular record formatting criteria that is designed in the record assembly process or in a record modification process. A translational change may occur as a result of one or more data processors ***using different software languages***. This case may arise in the instance where different types of computers are used to implement data processors 11 through 14. For example, data processor 11 may be a software module in one type of computer, e.g., a personal or minicomputer, whereas data processor 12 through 14 may be software modules in a mainframe computer. A spurious-operational change occurs when a data processor changes the value of a data field. Typically, a spurious-operational change is indicative of ***a processing error*** in one of the data processor.

"The user may then examine the contents of each of the displayed flagged fields to determine if a change represents a normalizational, translational or spurious-operational change, as defined above." Col. 4, lines 20-24. Huh does not calculate the likelihood, but rather a user identifies a change as an error. Further, because Huh compares a data record before a process with the data record after the process, there is no need for Huh to calculate any likelihood.

In Huh, any changes are flagged as a possible error. Col. 3, line 64 to col. 4, line 7. A user would then examine the contents of the flagged fields and determine whether to mark the fields as containing errors. Col. 4, line 20 to col. 4, line 38. This result is a binary decision. In contrast, in a financial risk management system, changes are not necessarily the result of an error. Huh's error rate is not the same as a likelihood or a confidence level. Huh's "error rate" determines how many errors occurred (*i.e.*, number of errors accumulated), not whether a change was a result of an error. As a result, Huh's error rate assumes that any change is a 100% chance that a change is an error.

When a record changes from one process to another, a user determines a class for that change. Col. 4, lines 20-23. *All of these changes are errors*, so the user only needs to identify the *type* of error. Col. 3, lines 28-32. For example, if an extra space has been inserted, the user would classify the error as a normalization change. Col. 3, lines 35-39. In another example,

when a data processor change the value of a data field, the user would classify the error as a spurious-operational change. Col. 3, lines 48-49. Thus, once a change has been identified, the user classifies the change based upon what caused the change. In other words, the user looks at the cause of the error to classify the change.

Also, Huh does not teach or suggest using "input data" and "historical values." Huh analyzes data records after they have gone through processes to determine if the processes have changed the data. *See* col. 1, lines 39-65. The fields in the data records are compared to the fields of the same data records after the processes. *See* col. 3, line 64 to col. 4, line 2. So Huh recites using the same data record, which does not teach or suggest "input data" and "historical values."

Furthermore, in an Office Action mailed February 20, 2007 for U.S. Patent Application Serial No. 10/989,046, Examiner Samica Norman recognized that:

> Reboh et al. and Huh et al. fails to teach wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: (i) calculating the information content of the input data; and (ii) performing a statistical analysis of the calculated information content relative to the one or more historical values to determine the likelihood that changes to the input data are the result of one or more errors.

See pages 7-8. Thus, the Patent Office has recognized these deficiencies in Huh.

The Examiner does not assert Nawrocki for any portion of the rejections on pages 8-9 of the Office Action. Nevertheless, Nawrocki fails to cure the deficiencies of Reboh, Hedstrom, and Huh. Nawrocki is directed to estimating a level of risk for different securities, not determining whether changes to the information content of the input data is the result of errors. *See* pages 412-13. As a result, Nawrocki calculates the risk by using factors such as rate of return states to "evaluate portfolio performance." *See* pages 415-16. Nawrocki allegedly improves on previous calculations by using weighted entropy. Page 418. But by determining a "relative investment performance" of a financial portfolio, Nawrocki is not "determining the likelihood that changes to the information content of the input data is the result of one or more errors." As recited in the specification of the present application, "One embodiment of the present invention uses a data file containing the results from conventional calculations performed by a PSE Server 101 to perform Content Analysis and thus determine *whether changes in the exposure profile are likely caused by some error in the input data*." Para. [0037] (emphasis added). The present application further recites that a user can "determine if there are errors in

the data that need attention." Para. [0042]. Because Nawrocki uses the market data to correlate the reward with the risk, Nawrocki cannot teach a determination that a change to input data was a result of an error. Nawrocki is merely analyzing invested stocks to determine the risk of that investment. Indeed, Nawrocki's use of entropy is not analogous to the problem being solved by the present application.

Thus, Huh and Nawrocki fail to cure the deficiencies of Reboh and Hedstrom. Therefore, claims 35, 41, and 42 are believed to be allowable. Therefore, it is respectfully requested that the rejection of claims 35, 41, and 42 be withdrawn.

Double Patenting

Claims 11-15, 17-20, and 29-34 are rejected based on the judicially created doctrine of double patenting in view of U.S. Patent Application Serial No. 10/989,046. Because the '046 application is no longer pending, the provisional double patenting rejection is rendered moot. Therefore, it is respectfully requested that this rejection be withdrawn.

CONCLUSION

The undersigned representative respectfully submits that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution might be advanced by discussing the application with the undersigned representative, in person or over the telephone, we welcome the opportunity to do so. In addition, if any additional fees are required in connection with the filing of this response, the Commissioner is hereby authorized to charge the same to Deposit Account 50-4402.

Respectfully submitted,

Date: October 25, 2010
KING & SPALDING LLP
1700 Pennsylvania Ave., NW
Washington, DC 20006
(202) 626-8980

By: */Eric Sophir, Reg. No. 48,499 /*
Eric L. Sophir
Registration No. 48,499